PATENT
Attorney Docket No. EXT-062CN

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):	Adams *et al.*		
SERIAL NO.:	09/939,275	GROUP NO.:	1655
FILING DATE:	August 24, 2001	EXAMINER:	Not yet assigned
TITLE:	Methods for Purifying DNA Using Immobilized Capture Probes		

Box Missing Parts
Commissioner of Patents
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

AMENDMENTS

Before examining the above identified application, kindly amend the application as follows:

IN THE SPECIFICATION:

Please enter the sequence listing. Please further amend the specification to read as follows. A marked-up copy of the amended paragraphs showing the amendments is attached.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic representation of purifying a target nucleic acid molecule from an extension sequencing reaction using an electrophoresis gel with capture probes immobilizing within a region of the gel.

FIG. 2 is a schematic representation of the steps involved in purifying extension products using a microtiter well comprising an electrophoretic medium containing capture probes immobilized within the medium.

FIG. 3 is the organization of sequencing and capture primers relative to the template, M13mp18 [SEQ ID NO. 3].

FIG. 4 is a schematic drawing illustrating the experimental design for DNA isolation using an electrophoretic medium.

FIG. 5 shows the effects of varying the elution voltage.

FIG. 6 shows results obtained from subjecting extension sequencing products to electrophoresis in which the electrophoretic medium contained immobilized capture probes; FIG. 6a shows the results of the experiment after running the gel for thirty minutes; FIG. 6b shows the results of the experiment after sixty minutes.

Please amend the third full paragraph on page 17 as follows:

To characterize the eluted products, samples of purified and crude sequencing products were subjected to electrophoresis in a polyacrylamide gel containing a discrete layer of gel immobilized capture probe arranged as a horizontal band across the width of the gel (see "Capture layer" in FIG. 6). The gel was composed of 5% polyacrylamide (29:1 monomer:bis wt/wt), 1 x TBE. The capture layer contained the same polyacrylamide and buffer with 10 μM of the 5'-acrylamide capture probe (5'-acrylamide-GGG ATC CTC TAG AGT CGA CCT 3' [SEQ ID No. 2]). The samples were subjected to electrophoresis run at 150 Volts for 30 minutes (FIG. 6a) and 60 minutes (FIG. 6b). Lane 1 contains 15 μL of the sample that had been purified by electrophoretic capture and elution, and lane 2 contains 5 μL of the unpurified sequence product. Figure 6a shows that the hybridization-purified product (lane 1) has been purified away from the excess primers, which are seen in the unpurified sample at the bottom of lane 2.

REMARKS

Following entry of the amendments, claims 1-20 are pending in this application.

CONCLUSION

Applicants respectfully submit that the claims are allowable. If the Examiner believes that a conversation with Applicants' agent would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at the telephone number below.

Applicants believe that no fees are due with this submission. However, the Director is hereby authorized to charge any fees that may be due to deposit account No. 20-0531.

Respectfully submitted,

Date: November 19, 2001
Reg. No. 41,418

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MARKED UP SPECIFICATION SHOWING AMENDMENTS

Brief Description of Drawings on page 4:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic representation of purifying a target nucleic acid molecule from [a] an extension sequencing reaction using an electrophoresis gel with capture probes immobilizing within a region of the gel.

FIG. 2 is a schematic representation of the steps involved in purifying extension products using a microtiter well comprising an electrophoretic medium containing capture probes immobilized within the medium.

FIG. 3 is the organization of sequencing and capture primers relative to the template, M13mp18 [SEQ ID NO. 3].

FIG. 4 is a schematic drawing illustrating the experimental design for DNA isolation using an electrophoretic medium.

FIG. 5 [is] shows the effects of varying the elution voltage.

FIG. 6 [is] shows results obtained from subjecting extension sequencing products to electrophoresis in which the electrophoretic medium contained immobilized capture probes; FIG. 6a shows the results of the experiment after running the gel for thirty minutes; FIG. 6b shows the results of the experiment after sixty minutes.

Third Full Paragraph of page 17:

To characterize the eluted products, samples of purified and crude sequencing products were subjected to electrophoresis in a polyacrylamide gel containing a discrete layer of gel immobilized capture probe arranged as a horizontal band across the width of the gel (see "Capture layer" in FIG. 6). The gel was composed of 5% polyacrylamide (29:1 monomer:bis wt/wt), 1 x TBE. The capture layer contained the same polyacrylamide and buffer with 10 μM of the 5'-acrylamide capture probe (5'-acrylamide-GGG ATC CTC TAG AGT CGA CCT 3' [SEQ ID No. 2 [6]). The samples were subjected to electrophoresis run at 150 Volts for 30 minutes (FIG. 6a) and 60 minutes (FIG. 6b). Lane 1 contains 15 μL of the sample that had been purified by electrophoretic capture and elution, and lane 2 contains 5 μL of the unpurified sequence product. Figure 6a shows that the hybridization-purified product (lane 1) has been purified away from the excess primers, which are seen in the unpurified sample at the bottom of lane 2.

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TRANSMITTAL OF FORMAL DRAWINGS

Sir:

Attached please find the formal drawings for this application – Number of sheets – 6.

Respectfully submitted,

Pat R H Wall

Date: November 19, 2001
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